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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,936

05/11/2005

John O'Donnell

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10/12/2006

MORGAN LEWIS & BOCKIUS LLP  
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EXAMINER

SHAH, MANISH S

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/509,936	O'DONNELL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Manish S. Shah	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-5 & 12-15 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 10, 17 & 18 of U.S. Patent No. 6932466.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is disclosed in the US Patent and is covered by the US Patent, since US Patent and the application are claiming common subject matter, as follows as shown in Table: 1 & 2 below.

**TABLE: 1**

# US 6932466 CLAIMS	# 10/509936 CLAIMS
<p>1. An ink-jet printing process comprising the steps (a) and (b) in any order or simultaneously:</p> <p>(a) applying an ink to a substrate by means of an ink-jet printer in a localized manner to form an image on the substrate; and</p> <p>(b) applying to the substrate a composition comprising a liquid medium and a poly(C<sub>3-18</sub>-hydrocarbyl monoguanidine) or a salt thereof by means of an ink-jet printer.</p> <p>17. A set of liquids suitable for use in an ink-jet printer comprising:</p> <p>(a) a first liquid comprising:</p> <p>(i) 0.01 to 50 parts of a poly(C<sub>3-18</sub>-hydrocarbyl monoguanidine);</p> <p>(ii) 50 to 99.8 of a liquid medium selected from water, one or more water-soluble organic solvents and a mixture of water and one or more water-soluble organic solvents; and</p> <p>(iii) 0 to 50 parts of a binder;</p> <p>wherein the parts are by weight and the total number of parts (i)+(ii)+(iii)=100; and</p> <p>(b) an ink comprising a colorant and a liquid medium.</p>	<p>1. An ink-jet printing process comprising the steps (a) and (b) in any order or simultaneously:</p> <p>(a) applying an ink to a substrate by means of an ink-jet printer to form an image on the substrate; and</p> <p>(b) applying to the substrate a fixing composition comprising a liquid medium and a polymer containing a plurality of monoguanide and/or biguanide groups by means of an ink-jet printer, wherein the fixing composition has a concentration of 0.1 to 10% wt% of polymer containing the plurality of monoguanide and/or biguanide groups; characterized in that in the fixing composition has a chloride concentration less than 400 ppm by weight.</p> <p>3. A process according to claim 1 wherein the polymer containing a plurality of monoguanide and/or biguanide groups is a polymonoguanide and/or a polymeric biguanide.</p> <p>4. A process according to claim 1 wherein the polymer containing a plurality of monoguanide and/or biguanide groups is a polymonoguanide.</p>
<p>2. A process according to claim 1 wherein the fixing composition is applied to the substrate in a localized manner and the areas where the ink and composition are applied in steps (a) and (b) are substantially coextensive.</p>	<p>2. A process according to claim 1 wherein the fixing composition is applied to the substrate in a localized manner and the areas where the ink and composition are applied in steps (a) and (b) are substantially coextensive.</p>
<p>3. A process according to any one of preceding claims wherein the poly(C<sub>3-18</sub> hydrocarbyl monoguanidine) comprises a plurality of groups of Formula (1) and/or groups of Formula (2) or salts thereof:</p> <div style="text-align: center;"> <math display="block">\text{---Y---NR---C(=NR)---NR---Y---NR---C(=NR)---NR---}</math> <p>Formula (1)</p> </div> <div style="text-align: center;"> <math display="block">\text{---A---N(R)---C(=NR)---NR---B---N(R)---C(=NR)---NR---}</math> <p>Formula (2)</p> </div> <p>wherein:</p> <p>each m independently is 0 or 1;</p> <p>each Y independently is a C<sub>2-18</sub>-hydrocarbyl group;</p> <p>A and B are hydrocarbyl groups which together comprise a total of 3 to 18 carbon atoms; and</p> <p>each R independently is hydrogen, optionally substituted alkyl or optionally substituted alkoxy.</p>	<p>5. A process according to claim 4 wherein the polymonoguanide comprises a plurality of groups of Formula (1) and/or groups of Formula (2) or salts thereof:</p> <div style="text-align: center;"> <math display="block">\text{---Y---NR---C(=NR)---NR---Y---NR---C(=NR)---NR---}</math> <p>Formula (1)</p> </div> <div style="text-align: center;"> <math display="block">\text{---A---N(R)---C(=NR)---NR---B---N(R)---C(=NR)---NR---}</math> <p>Formula (2)</p> </div> <p>wherein:</p> <p>each m independently is 0 or 1;</p> <p>each Y independently is a C<sub>3-18</sub>-hydrocarbyl group;</p> <p>A and B are hydrocarbyl groups which together comprise a total of 3 to 18 carbon atoms; and</p> <p>each R independently is hydrogen, optionally substituted alkyl or optionally substituted alkoxy.</p>
<p>10. A substrate printed with an image by means of the process according to claim 1 or 2.</p>	<p>13. A substrate printed with an image by means of the process according to claim 1.</p>

**TABLE: 2**

# US 6932466 CLAIMS	# 10/509936 CLAIMS
<p>17. A set of liquids suitable for use in an ink-jet printer comprising:</p> <p>(a) a first liquid comprising:</p> <p>(i) 0.01 to 50 parts of a poly(C<sub>3-18</sub>-hydrocarbyl monoguanidine);</p> <p>(ii) 50 to 99.8 of a liquid medium selected from water, one or more water-soluble organic solvents and a mixture of water and one or more water-soluble organic solvents; and</p> <p>(iii) 0 to 50 parts of a binder;</p> <p>wherein the parts are by weight and the total number of parts (i)+(ii)+(iii)=100; and</p> <p>(b) an ink comprising a colorant and a liquid medium.</p>	<p>12. A composition comprising:</p> <p>(a) from 0.1 to 10 parts of polymer containing a plurality of monoguanide and/or biguanide groups or salt thereof;</p> <p>(b) from 0 to 10 parts of a binder; (c) from 30 to 60 parts of a water-soluble organic solvent; and</p> <p>(d) from 35 to 80 parts water;</p> <p>wherein all parts are by weight and the total number of parts (a)+(b)+(c)+(d)=100 and the composition contains less than 400 ppm by weight of chloride ions.</p> <p>14. A set of liquids suitable for use in an ink jet printer comprising: (a) a fixing composition according to claim 12; and (b) an ink comprising a colorant and a liquid medium.</p>
<p>18. An ink-jet printer cartridge comprising a plurality of chambers and a set of liquids, wherein the liquids are contained in individual chambers of the ink-jet printer cartridge and the set of liquids is as defined in claim 17.</p>	<p>15. An ink jet printer cartridge comprising a plurality of chambers and a set of liquids, wherein the liquids are contained in individual chambers of the ink jet printer cartridge and the set of liquids is as defined in claim 14.</p>

In the above references, it is the examiner's position that it would have been obvious to one having ordinary skill in the art that: the fixing composition has a chloride concentration less than 400ppm by weight, since the polymonoguanide compound of the above references are the same structure as those claimed by applicant.

It would have been obvious to one having ordinary skill in the art at the time of invention was made to incorporate chloride concentration less than 400ppm by weight, since it has been held that it is not inventive to discovering and optimum value or workable ranges by routine experimentation. *In re Aller*, 105 USPQ 233 (CCPA1955).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

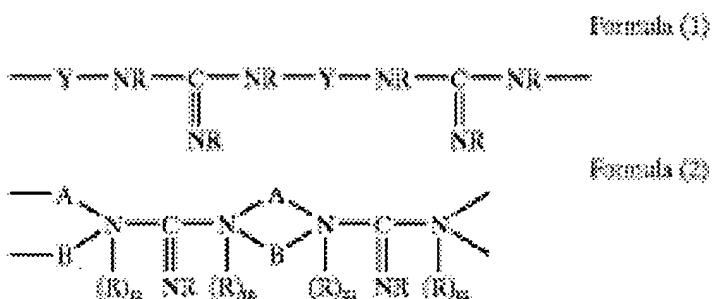
3. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Payne et al. (# WO 02/45971 A1).

Payne et al. discloses an ink-jet printing process comprising the steps (a) and (b) in any order or simultaneously: (a) applying an ink to a substrate by means of an ink-jet printer to form an image on the substrate; and (b) applying to the substrate a fixing composition comprising a liquid medium and a polymer containing a plurality of monoguanide and/or biguanide groups by means of an ink-jet printer (see Abstract);

- The fixing composition is applied to the substrate in a localized manner and the areas where the ink and composition are applied in steps (a) and (b) are substantially coextensive (see Claim 2; page: 22).

- The polymer containing a plurality of monoguanide and/or biguanide groups is a polymonoguanide and/or a polymeric biguanide, wherein the polymer containing a plurality of monoguanide and/or biguanide groups is a polymonoguanide (page: 4, line: 5-20).

- The polymonoguanide comprises a plurality of groups of Formula (1) and/or groups of Formula (2) or salts thereof



wherein: each  $m$  independently is 0 or 1; each  $Y$  independently is a  $C_{3-18}$ -hydrocarbyl group;  $A$  and  $B$  are hydrocarbyl groups which together comprise a total of 3 to 18 carbon atoms; and each  $R$  independently is hydrogen, optionally substituted alkyl or optionally substituted alkoxy (page: 2, line: 15-35).

- The polymonoguanide has been obtained by a process comprising melt polymerisation of a  $C_{3-18}$ -hydrocarbyl diamine with a guanidine salt other than guanidine hydrochloride (page: 4, line: 8-15).

- A process for preparing a polymonoguanide comprising solvent or melt polymerisation of a  $C_{3-18}$ -hydrocarbyl diamine with a guanidine salt other than guanidine hydrochloride (page: 4, line: 8-15; , wherein the polymerisation is melt polymerisation performed at a temperature of 100 C to 200 C (see Examples).

- A composition comprising: (a) from 0.1 to 10 parts of polymer containing a plurality of monoguanide and/or biguanide groups or salt thereof; (b) from 0 to 10 parts of a binder; (c) from 30 to 60 parts of a water-soluble organic solvent; and (d) from 35

to 80 parts water; wherein all parts are by weight and the total number of parts (a)+(b)+(c)+(d)=100 (page: 6, line: 25-35).

- A substrate printed with an image by means of the process according to ink jet printing process (see Examples).
- A set of liquids suitable for use in an ink jet printer comprising: (a) a fixing composition and (b) an ink comprising a colorant and a liquid medium (see claim: 14; page: 24).
- An ink jet printer cartridge comprising a plurality of chambers and a set of liquids, wherein the liquids are contained in individual chambers of the ink jet printer cartridge and the set of liquids (see claims 15-16; page: 24).

Payne et al. fail to teaches that the fixing composition has a chloride concentration less than 400ppm by weight.

It would have been obvious to one having ordinary skill in the art at the time of invention was made to incorporate chloride concentration less than 400ppm by weight, since it has been held that it is not inventive to discovering and optimum value or workable ranges by routine experimentation. *In re Aller*, 105 USPQ 233 (CCPA1955).

### ***Response to Arguments***

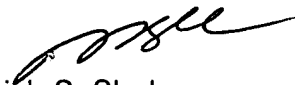
4. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Manish S. Shah  
Primary Examiner  
Art Unit 2853

MSS

10/4/06